UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
841 Chestnut Building
Philadelphia, Pennsylvania 19107

In Reply Refer To: **3HW51**

APR 28 1993

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Mr. John E. Breen
Vice President and General Manager
Lighting Technology Division
General Electric Company
Nella Park, Cleveland, OH 44112

Re: GE Bridgeville Glass Plant
Bridgeville, PA
EPA ID No. PAD 06 068 2622
Final Permit Modification Number 2

Dear Mr. Breen:

The United States Environmental Protection Agency (EPA) has made a final determination under the Resource Conservation and Recovery Act (RCRA), 42 USC {{ 6921 - 6939(b), to modify the Environmental Protection Agency's (EPA) Permit Modification Number 1 issued to General Electric Company as operator (and owner) of General Electric Company - Bridgeville Glass Plant. Permit Modification Number 2 is effective May 31, 1993. A copy of the RCRA Permit Modification Number 1 and Number 2 for corrective action and waste minimization is included as Enclosure 1. The text of Permit Modification Number 2 has been incorporated into the text of the October 1, 1992 Permit Modification for ease of reference.

On December 9, 1992, EPA published a public notice, under regulation 40 CFR § 124.10, of its tentative decision to modify Permit Modification Number 1. A forty-five (45) day comment period was provided for any interested person(s) to comment on the draft Permit Modification Number 2. EPA has made the determination, based on all the information received during the public comment period, to modify the Permit Modification Number 2 with minor changes. EPA's Response-To-Comments is included as Enclosure 2. This final permit modification is made under regulation 40 CFR § 270.42(c).

Pennsylvania Department of Environmental Resources (PADER), and General Electric Company may, under regulation 40 CFR § 124.19, petition the Environmental Appeals Board of the United

States Environmental Protection Agency to review any condition of the permit modification which was the subject of comment during the public comment period, provided the appeal is filed within thirty-three days (30 days plus 3 days for service of notice by mail) of the issuance of this Notice of Decision.

The petition must include a statement of the reasons supporting that review, including a demonstration that any issues raised were developed during the public regulations governing public comment. See regulations 40 CFR §§ 124.10 and 124.13. When appropriate, the petitioner should include a showing that the contested condition is based on one of the following factors as set forth in 40 CFR § 124.19(a)(1)-(2):

(1) clearly erroneous findings of fact or conclusions of law; or

(2) an exercise of discretion or an important policy consideration that the Board should review, in its discretion.

A copy of the appeal procedures is included as Enclosure 3.

The Board must issue an order that grants or denies the petition within a reasonable time following the filing of the petition. Public notice of any grant of administrative review under regulation 40 CFR § 124.19 must be given as provided in regulation 40 CFR § 124.10. The public notice must contain a briefing schedule for the appeal and a statement that any interested persons may file amicus briefs. If the review is denied, notice need only be sent to the respective petitioners and the permittee.

If any person should decide to appeal Permit Modification Number 2, the original and one copy of the petition for review should be filed with the Environmental Appeals Board at the following address:

U.S Environmental Protection Agency
Office of the Administrator
Environmental Appeals Board (A-101)
401 M Street, SW
Room 1145 (West Tower)
Washington, DC 20460

Should the permit modification be appealed, a copy of the petition should also be sent to:

RCRA Programs Branch (3HW50)
EPA Region III

841 Chestnut Building
Philadelphia, PA 19107

Should you have any questions concerning this Notice of Decision, please feel free to contact Paul Gotthold, Pennsylvania Permit Section, at (215) 597-7937.

Sincerely,

for Maria Parisi Vickers, Associate
Division Director for RCRA Programs,

Enclosures:

RCRA Permit Modification Number 1 and 2
Response-To-Comments
RCRA Appeal Procedures

cc: Anthony Orlando, Regional Manager, PADER-BWM

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
FINAL PERMIT MODIFICATIONS NUMBER 1 AND 2
FOR CORRECTIVE ACTION and WASTE MINIMIZATION
UNDER THE HAZARDOUS AND SOLID WASTE
AMENDMENTS OF 1984

Permittee: General Electric Company - Bridgeville Glass Plant
Facility Location: Mayer Street, Collier Township, PA 15017
EPA Identification Number: PAD 06 068 2622

This Permit Modification is issued by the United States Environmental Protection Agency (EPA) under the authority of the Resource Conservation and Recovery Act, as amended by the Hazardous and Solid Waste Amendments of 1984 (HSWA), 42 U.S.C. §§ 6901 et seq. (hereinafter "RCRA"), and regulations promulgated thereunder and set forth at 40 C.F.R. Parts 260-271. This Permit Modification is issued to General Electric Company (hereinafter the Permittee), for its Glass Plant located on Mayer Street, Bridgeville, Collier Township, Pennsylvania 15017, at latitude 40° 21′ 55" North and longitude 89° 06′ 20" West ("Facility").

This Permit Modification modifies the HSWA Permit Modification issued to the Permittee for the Facility on October 1, 1992. The Permittee shall comply with all terms and conditions of the original HSWA permit issued to the Permittee on September 28, 1990, the October 1, 1992 Permit Modification, and this Permit Modification.

This Permit Modification is based on the assumption that the information submitted by the Permittee to EPA in connection with the Permit or any modifications thereof is accurate. Further, this Permit Modification is based in part on the provisions of Sections 206 which amended RCRA by adding Section 3004(u). Section 3004(u) requires corrective action for all releases of hazardous waste or hazardous constituents from any solid waste management unit at a treatment, storage, or disposal facility seeking a RCRA permit, regardless of the time at which waste was placed in such unit.

Any inaccuracies found in the information submitted by the Permittee in connection with the Permit or any modifications thereof may be grounds for the termination, modification or revocation and reissuance of this permit (see 40 C.F.R. §§ 270.41, 270.42 and 270.43). The Permittee shall inform EPA of any deviation from or changes in the information submitted by the Permittee in connection with the Permit or any modifications thereof which would affect the Permittee's ability to comply with the applicable statutes, regulations or permit conditions.

Note: The text of Permit Modification Number 2 has been incorporated into the text of the October 1,1992 Permit Modification for ease of reference. The text of Permit

Modification Number 2 has been highlighted throughout this final Permit Modification.

Permit Modification Number 1 was effective as of November 4, 1992, changes noted as Permit Modification Number 2 are effective May 31, 1993, and shall remain in effect until October 30, 2000, unless revised and reissued, modified or terminated in accordance with 40 C.F.R. §§ 270.41 or 270.43 or continued in accordance with 270.5(a).

I. Corrective Measures Implementation

Based on information the Permittee submitted in the Corrective Measures Study (CMS) Final Report, and other relevant information, the Regional Administrator has selected a remedy for the Solid Waste Management Unit (SWMU) 1, the Landfill (hereinafter called the Landfill or Site) at the GE Bridgeville Site. This permit modification incorporates such remedy and provides for its implementation pursuant to 40 C.F.R. § 270.41.

The Permittee shall implement the Corrective Measure Alternatives identified in the Corrective Measures Study (CMS) Final Report. These include:

-Access Control Fence
-Asphalt/Concrete Cap
-Sheet Pile Wall
-Recovery Trench
-Groundwater Monitoring
-Monitoring of Chartiers Creek

The following is a general discussion of the Corrective Measures required at the Site. Section IV. lists the specific permit requirements needed to achieve compliance.

A. Access Control Fence: The Permittee shall install a fence at the limits of the Landfill to restrict unauthorized access to the Site. (See Figure 5-2 CMS Final Report.) The Permittee shall inspect and maintain the fence to ensure its effectiveness.

B. Asphalt/Concrete Cap: The Permittee shall install an Asphalt/concrete cap over the entire exposed surface area of the Landfill. In areas of the landfill with existing structures the cap will abut these structures. The cap shall be designed to limit potential infiltration into the Landfill, control stormwater runoff, and eliminate the potential for direct contact with the Landfill.

C. Sheet Pile Wall: The Permittee shall install a sheet

pile wall along the edge of the Landfill immediately adjacent to Chartiers Creek. The sheet pile wall shall be designed to minimize potential surface water contact and erosion of the Landfill into Chartiers Creek, and limit potential flow from the creek to the Landfill during high creek levels.

D. Recovery Trench: The Permittee shall install a recovery trench to collect groundwater which may have contacted the Landfill, and to collect potential flow from Chartiers Creek through the lateral containment wall which might occur during high creek levels.

E. Groundwater Monitoring: The Permittee shall establish and implement a quarterly groundwater monitoring program, using existing monitoring wells, and additional proposed wells identified in the CMS Final Report. EPA requires that quarterly monitoring begin the first quarter of calendar year 1993. Constituents to be monitored are Arsenic, Barium, Chromium, Cadmium, Lead, Chloride, Iron, Manganese, Phenols, Sodium, Sulfate, pH, Specific Conductance, Total Petroleum Hydrocarbons, Total Organic Carbon, and Total Organic Halogens.

F. Surface Water Monitoring of Chartiers Creek: The Permittee shall establish baseline[1] conditions for the surface water in Chartiers Creek prior to initiation of Corrective Measures construction activities. Baseline data for the parameters listed in Table 3 shall be obtained from a sample location downstream of the Landfill at the facility property line. Thereafter, surface water samples from the same downstream location in Chartiers Creek shall be obtained and analyzed annually for the parameters listed in Table 3 and compared to baseline data.

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[1] Baseline conditions for surface water show constituent levels present in the surface water prior to construction activities. This baseline condition is established by taking a number of representative samples at the point of compliance. The Permittee is required to submit a Quality Assurance Project Plant (QAPP) to EPA for approval which will identify the sample methods, locations, and statistical analysis to be utilized in determining baseline conditions in Chartiers Creek. The final determination of a baseline value for surface water is contingent on EPA approval. Baseline or baseline concentrations are levels at which the constituents are present at a specific time, prior to an event occurring. Baseline concentrations are established by sampling for the monitored constituents or parameters prior to the awaited event.

Based on results of the surface water sampling, the Permittee may submit recommendations, for EPA review and approval, about the necessity and frequency of continued sampling.

G. Sediment Samples from Chartiers Creek: The Permittee shall establish baseline conditions for the sediment in Chartiers Creek prior to initiation of Corrective Measures construction activities. Baseline data on the parameters listed in Table 3 shall be obtained from sample locations both adjacent to and downstream of the Landfill. Thereafter, sediment samples from the same adjacent and downstream locations in Chartiers Creek shall be obtained and analyzed annually for the parameters listed in Table 3 and compared to baseline data.

Based on results of the sediment sampling, the Permittee may submit recommendations, for EPA review and approval, about the necessity and frequency of continued sampling.

II. Remedy Design

A. The Permittee is required to submit to EPA for approval a Corrective Measures (CMI) Design Plan (as described in Section II) which includes the designs and schedule for expeditious implementation of the corrective measures identified in Section I.

B. The design plans shall be submitted according to the schedule in Section VII, below.

C. The Permittee shall submit to EPA for review and approval an inspection and maintenance/repair plan, that is designed to properly operate and maintain corrective measures and to promote the continued effectiveness of the selected corrective measures. This plan shall include an operation and maintenance/repair plan to address, among other things, weathering and cracking of the asphalt/concrete cap materials. Also, the Permittee shall include an inspection/maintenance and repair plan for the groundwater monitoring wells. All these plans shall be included as part of the CMI Design Plan. The Permittee shall implement the EPA approved plans in accordance with the terms and schedules therein.

D. The Permittee must submit a Health and Safety Plan which addresses the procedures which will be followed

to protect all workers who may potentially come in contact with the fill during implementation of the Corrective Measures.

III. Media Cleanup Standards/Effectiveness Monitoring

A. Groundwater: The media cleanup standard for groundwater is background[2] or Maximum Contaminant Levels (MCLs) for Primary Drinking Water (40 C.F.R. Part 141).[3] The concentration of each hazardous constituent listed in Table 2 and found in groundwater at the Facility shall not exceed the "background" level of such hazardous constituent at the Site or MCLs, whichever is higher. Background levels will be established using U.S. EPA statistical procedures referenced in "Statistical Analyses of Groundwater Monitoring Data at RCRA Facilities," Interim Final Guidance, February 1989, and Addendum July, 1992, EPA/530-SW-89-026, or other methods approved by EPA. Figure 1 is a schematic which illustrates how background or MCLs will be utilized as a media cleanup standard.

B. Surface Water: Analysis of surface water samples obtained from downstream of the Landfill shall indicate no statistically significant increase above the baseline surface water data, established prior to Corrective Measures Implementation (CMI) construction activities, for each constituent listed in Table 3.

C. Sediment: Analyses of sediment samples obtained adjacent to and downstream of the Landfill shall indicate no statistically significant increase above the baseline sediment data, established prior to CMI construction activities, for each constituent listed in Table 3.

IV. Requirements for Achieving Compliance

A. Groundwater Compliance Monitoring Program: The Permittee is required to initiate a Corrective Action Effectiveness Monitoring Program. The requirements of the monitoring program are detailed in Table 2 and

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[2] Background is the concentration of the constituents detected in the groundwater upgradient of the Landfill. Background conditions are established by sampling for the constituents or parameters for four (4) consecutive quarters.

[3] MCLs are federally enforceable drinking water standards developed under the Safe Drinking Water Act, 42 U.S.C. §§ 300f et seq., and codified at 40 C.F.R. Part 141.

shown schematically in Figure 1. This permit condition replaces the Groundwater Detection Monitoring condition found in Section III.D of the original EPA HSWA permit.

1. Groundwater monitoring wells MW-1, MW-2, MW-3, MW-4, MW-6, MW-7, MW-8A, MW-12A, MW-15, MW-16, MW-17, proposed monitoring well MW-20, and the new well MW-21 (to be installed on the south side of Chartiers Creek) shall be used to monitor constituents in the alluvial aquifer in accordance with the requirements set forth in Table 2. Monitoring wells MW-2, MW-16, MW-17 and the new well MW-21 will be considered supplemental wells. Monitoring wells MW-5, MW-8, MW-9, MW-10, MW-12, and MW-14 will be used to monitor the groundwater elevation within the fill materials. Table 2 summarizes the monitoring well scheme, sampling frequency and parameter list. The Permittee shall submit the results of the sampling annually to EPA (See Section IV.A.7). Based on the results of the groundwater sampling the Permittee shall make recommendations to EPA for approval regarding the necessity and frequency of continued sampling. Monitoring wells shall be clearly visible, numbered and secured with a cap that can be locked to prevent vandalism.

2. The Permittee shall reinstall MW-1, and MW-15, so that they are only screened in the alluvium. Background water quality will then be determined from monitoring wells MW-1 and MW-15 in accordance with paragraph III.A. of this permit.

3. The constituents to be monitored are listed in attached Table 2.

4. Sampling, statistical methods, and laboratory analysis shall be conducted according to the July 1992 Quality Assurance Project Plan approved by the EPA. Quarterly sampling of the groundwater must begin the first quarter of calendar year 1993 in accordance with the requirements of Table 2 and continue until the Permittee can demonstrate to EPA that the media cleanup standard in Section III.A. has not been exceeded for a period of three consecutive years.

5. The Permittee shall measure and record the groundwater surface elevation, for each well, each time groundwater is sampled.

6. The Permittee shall determine and record the

groundwater flow rate and direction in the alluvial aquifer annually.

7. The Permittee shall keep a record of all monitoring, testing, and analytical data. Beginning January 1, 1994, and annually thereafter, the Permittee must submit to the EPA and the addressees in Section VIII a summary of the Corrective Action Effectiveness Monitoring Program. This summary is due to EPA by March 1st for actions that occurred the previous year.

8. The Permittee must determine whether there is a statistically significant increase in the concentrations of constituents listed in Table 2 in alluvial groundwater monitoring wells located beneath and downgradient of the landfill area. If there is a statistically significant increase in contamination, the Permittee must provide written notification to the EPA within 14 days of determination. Figure 1 illustrates a schematic of the Corrective Action Monitoring Program required for the facility.

9. The Permittee shall submit the following information as part of the Corrective Measures Implementation Report (See Section VII. C) unless otherwise noted:

   a. inspection and maintenance plans for the groundwater wells.

   b. well abandonment/replacement documentation for any wells abandoned or replaced.

   c. drilling logs and information of well development for the two new proposed monitoring wells MW-20, and MW-21, and any replacement wells.

   d. identification of those wells which will be considered upgradient and downgradient for the landfill and alluvium. Provide cross sections of all wells proposed for monitoring.

B. Surface Water/Sediment Compliance Monitoring: Within thirty (30) days of the effective date of this Permit Modification, the Permittee shall submit to EPA, for approval, an addendum to the July, 1992 Quality Assurance Project Plan. The addendum shall contain a Sample Collection Methods and Procedures Plan for the

surface water and sediment sample collection, and the statistical method which will be used to determine both the baseline conditions and significant increases in contamination. The addendum shall also include a map which shows the location of surface water and sediment sampling points. The addendum shall discuss the rationale the Permittee has used to determine the sampling locations. The addendum shall explain the methods the Permittee will use to establish baseline conditions for both surface water and sediment.

1. Sampling, statistical methods, and laboratory analysis shall be conducted according to an EPA approved Quality Assurance Project Plan. Establishment of baseline for surface water and sediment must be established prior to Corrective Measures Implementation (CMI) construction activities and continue annually until the Permittee petitions EPA and receives EPA approval to discontinue sampling.

2. The Permittee shall keep a record of all monitoring, testing, and analytical data. Beginning January 1, 1994, and annually thereafter, the Permittee must submit to the EPA and the addressees in Section VIII a summary of the Surface Water/Sediment Compliance Monitoring. This summary is due to EPA by March 1st for actions that occurred the previous year.

3. The Permittee must determine whether there is a statistically significant increase in the concentrations of constituents listed in Table 3 for surface water and sediment. If there is a statistically significant increase in contamination, the Permittee must provide written notification to the EPA within 14 days of determination. The notification must also include a schedule to investigate the source of contamination.

C. Landfill

1. The Permittee shall install an asphalt/concrete cap, sheet pile wall and recovery trench as corrective measures for the Landfill in accordance with the approved CMI Final Design Plan.

2. The Permittee shall monitor water levels in groundwater monitoring wells MW-5, MW-8, MW-10, and MW-12 according to the performance monitoring

program in Table 2 and Figure 1.

D. Recovery trench

Criteria for disposal of recovered groundwater must be provided in the CMI Design Plan.

V. Decontamination of Equipment

All equipment and devices used to implement the corrective measures must be decontaminated after final use. The Permittee is required to submit a detailed description of the steps needed to remove or decontaminate equipment as part of the Corrective Measures Implementation (CMI) Design Plan.

VI. Management of Wastes

A. For purposes of this permit, the Landfill is recognized by EPA as a Corrective Action Management Unit (CAMU). Therefore, the land disposal restriction requirements of 40 C.F.R. § 268 do not apply to earth moving activities within the Landfill unit, as outlined in the CMS Final Report.

B. Based on approval(s) from the Allegheny County Sanitation Authority, water collected during construction activities will be directly discharged to the Publicly Owned Treatment Works (POTW).

VII. Schedule and Submission of Progress Reports

A. Corrective Measures at the Landfill must be implemented according to the schedule in Table 1.

TABLE 1 Schedule

Design Activities	Submission Date to EPA
CMI Preliminary (30%) Design Plan	90 days from approval of permit modification
EPA Comments on Preliminary Design	120 days from approval of permit modification
CMI Draft Final (95%) Design Plan	165 days from approval of permit modification
EPA Comments on Final CMI Design Plan	195 days from approval of permit modification
Final CMI Design Plan Submission	210 days from approval of permit modification
Final CMI Design Plan Approval	215 days from approval of permit modification

Construction Activities	Date
Initiate Construction Activities	July 1, 1993
Complete Construction Activities	December 15, 1993
Certification of Completion	December 31, 1993

1. In order to meet a construction completion schedule of December 31, 1993, the final CMI Design Plan must be approved by May 3, 1993. If this deadline is not met due to factors beyond the Permittee's control, then the Permittee will submit a revised schedule for construction activities within 15 days of final CMI Design Plan approval.

2. Within 15 days of permit modification, the Permittee will initiate actions necessary to obtain permits necessary to complete the corrective measures. The Permittee must notify EPA of any permitting issues which may impact the design or construction schedule. The Permittee shall obtain all necessary local and state permits/approvals prior to the start of any construction activity requiring such permit/approval.

B. The Permittee is required to submit quarterly progress reports, beginning January 1993, to the EPA and

addressees in Section VIII which summarize the progress of remedy implementation, discuss changes or problems with the remedy, and provide data obtained during remedy implementation. Progress reports shall also include copies of all state and local permit applications and final permits.

C. Within sixty (60) days after the submittal of the Certification of Completion, the Permittee shall submit to EPA, for review and comment, a Draft Corrective Measure Implementation (CMI) Report. The CMI Report shall document that the project is consistent with the design specifications, and that the corrective measures are performing adequately. The CMI Report shall include, but not be limited to the following elements:

1. Synopsis of the corrective measures and certification of the design and construction;

2. Explanation of any modifications to the plans and why these were necessary for the project;

3. Listing of the criteria, established before the corrective measures were initiated, for judging the functioning of the corrective measures and also explaining any modification to these criteria;

4. Results of facility monitoring, indicating that the corrective measures will meet or exceed the performance criteria; and

5. Explanation of the operation and maintenance (including monitoring) to be undertaken at the facility.

The CMI Report shall include all of the daily inspection summary reports, inspection data sheets, problem identification and corrective measure reports, photographic reporting data sheet, design engineers' acceptance reports, deviations from design and material specification and as-built drawings. Within thirty (30) days of receipt of EPA's comments the Permittee shall submit to EPA a Final CMI Report which incorporates any revisions requested in EPA's comments.

VIII. Reports, Notifications and Submissions

All reports, notifications or other submissions required by this permit modification are to be sent Certified Mail, Return Receipt Requested, or hand delivered to:

RCRA Programs Branch (3HW50)
U.S. EPA Region III
841 Chestnut Building
Philadelphia, Pennsylvania 19107

Whenever a section of the permit modification requires copies of reports to be sent to an addressees list, the following list must be used:

Pennsylvania Department of Environmental Resources
Bureau of Waste Management
400 Waterfront Drive
Pittsburgh, Pennsylvania 15222

Allegheny County Health Department
Frank B. Clack Health Center
Building #5, 3901 Penn Avenue
Pittsburgh, Pennsylvania 15224-1347
Attn: Division of Public Drinking Water and Waste Management

Township of Collier
1500 Hilltop Road
Presto, Pennsylvania 15142
Attn: Board of Commissioners

Resubmit?

IX. Financial Assurance

Within one hundred and twenty (120) calendar days after the Permit modification is effective, the Permittee shall demonstrate to EPA financial assurance for completing the approved remedy in accordance with 40 C.F.R. §264.101(b).

X. Completion of Remedies

Upon completion of the remedy, the Permittee is required to submit a written certification to the EPA and addressees listed in Section VIII by registered mail stating that the remedy has been completed in accordance with the requirements of the permit and the Corrective Measures Implementation (CMI) Design Plan. The certification must be signed by the Permittee and by an independent registered professional engineer.

XI. Incorporated Reports into the Permit

All plans and reports including the CMS Final Report, the Quality Assurance Project Plans (QAPP's), the Final Corrective Measures Implementation Design Plan, upon approval of the EPA are incorporated into this permit. Any noncompliance with such approved studies, schedules, plans, reports or other submissions shall be deemed as

noncompliance with the permit. In the event of unforeseen circumstances beyond the control of the Permittee which could not be overcome by due diligence, the Permittee may request a change, subject to EPA approval, in the previously approved plans, reports, schedules or other submissions. This request may result in a major or minor modification of the permit.

4-28-93
DATE SIGNED

for MARIA PARISI VICKERS, ASSOCIATE DIVISION DIRECTOR FOR RCRA PROGRAMS, (HWMD)

TABLE 2: CORRECTIVE ACTION MONITORING PROGRAM
GENERAL ELECTRIC GLASS PLANT
BRIDGEVILLE, PENNSYLVANIA

MONITORING	*FREQUENCY*	*PARAMETERS*
Performance Monitoring Wells (wells screened in fill materials) *MW-5* *MW-8* *MW-9 (to be reinstalled)* *MW-10* *MW-12* *MW-14 (to be reinstalled)*	*Quarterly*	*Ground-Water Evaluation*
Alluvial Ground-water Quality Monitoring Wells (Background) *MW-1 (background) (to be reinstalled)* *MW-3* *MW-4* *MW-6 (to be reinstalled)* *MW-7* *MW-8A* *MW-12A* *MW-15 (background) (to be reinstalled)* *MW-20 (new well)*	*Quarterly*	*Arsenic** *Barium** *Cadmium** *Chromium** *Lead** *Total Petroleum Hydrocarbon* *Chloride* *Iron* *Manganese* *Phenols* *Sodium* *Sulfate* *pH* *Specific Conductance* *Total Organic Carbon* *Total Organic Halogen*
Supplemental Ground-water Quality Monitoring Wells *MW-2* *MW-16* *MW-17* *MW-21 (new well across creek)*	*Semi-Annually*	*Arsenic** *Barium** *Cadmium** *Chromium** *Lead** *Total Petroleum Hydrocarbon* *Chloride* *Iron* *Manganese* *Phenols* *Sodium* *Sulfate* *pH* *Specific Conductance* *Total Organic Carbon* *Total Organic Halogen*

**Total and Dissolved Constituent Concentrations*

TABLE 3: CORRECTIVE ACTION MONITORING PROGRAM FOR CHARTIERS CREEK

MONITORING	*FREQUENCY*	*PARAMETERS*
Surface Water Sampling Chartiers Creek	*Establish baseline prior to construction activities, annually thereafter.*	*Arsenic* Barium* Cadmium* Chromium* Lead* Total Petroleum Hydrocarbon*
Sediment Sampling in Chartiers Creek	*Establish baseline prior to construction activities, annually thereafter.*	*Arsenic* Barium* Cadmium* Chromium* Lead**

**Total and Dissolved Constituents*

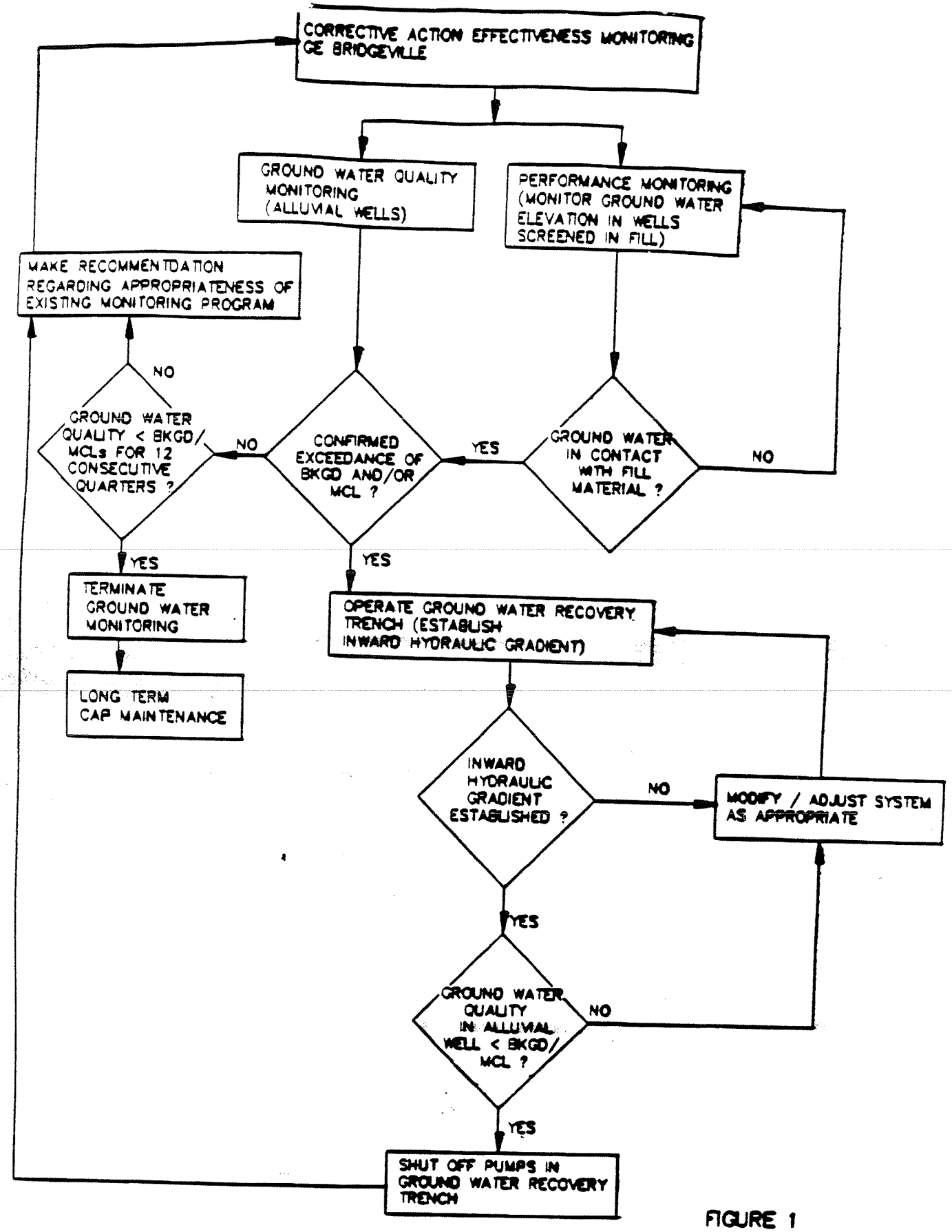

FIGURE 1
CORRECTIVE ACTION EFFECTIVENESS
MONITORING FLOWCHART